

ORIGINAL

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

FILED IN CLERK'S OFFICE
U.S.D.C. ATLANTA

MAR 15 2010

JAMES H. JATTON, Clerk
By: Deputy Clerk

VIDEO ENHANCEMENT SOLUTIONS,
L.L.C.,

Plaintiff,

v.

CREATIVE LABS, INC., FUNAI
CORPORATION, PANASONIC
CORPORATION OF NORTH AMERICA,
INC., PHILIPS ELECTRONICS NORTH
AMERICA CORP., PIONEER
ELECTRONICS (USA), INC., RESEARCH
IN MOTION LIMITED (USA), SAMSUNG
ELECTRONICS USA, INC., SEAGATE
TECHNOLOGY LLC, SONY
ELECTRONICS INC.,

Defendants.

Civil Action No.

JOF

1:10-CV-0748

COMPLAINT

Plaintiff Video Enhancement Solutions, LLC ("VES") files this its
Complaint against Defendants, showing this Court as follows.

NATURE OF THE ACTION

1.

This is an action for patent infringement, arising out of Defendants' infringement of U.S. patents relating to the art of video compression and decompression. Specifically, this Complaint asserts claims against Defendants arising from their infringement of various claims in U.S. Pat. No. 7,397,965, issued on July 8, 2008, and entitled "Method of Encoding a Blocking Artifact When Coding Moving Picture" (the "'965 Patent") and U.S. Pat. No. 7,492,960, issued on February 17, 2009, and also entitled "Method of Encoding a Blocking Artifact When Coding Moving Picture" (the "'960 Patent"). [True and correct copies of the '965 Patent and the '960 Patent are attached hereto as Exhibits A and B, respectively.]

THE PARTIES

2.

Plaintiff is a limited liability company, organized and existing under the laws of Texas. Plaintiff's principal place of business is located within this District.

3.

Upon information and belief, Defendant Creative Labs, Inc. ("Creative") is a corporation organized and existing under the laws of the state of California.

Upon information and belief, Creative's principal place of business is located in Milpitas, California. Creative's registered agent for service of process is Russell Nicholas Swerdon, 1901 McCarthy Boulevard, Milpitas, CA 95035.

4.

Upon information and belief, Defendant Funai Corporation, Inc. ("Funai") is a corporation organized and existing under the laws of the state of New Jersey. Upon information and belief, Funai's principal place of business is located in Torrance, California. Funai's registered agent for service of process is National Corporate Research, Ltd., 523 West 6th Street, Suite 544, Los Angeles, California 90014.

5.

Upon information and belief, Defendant Panasonic Corporation of North America, Inc. ("Panasonic") is a corporation organized and existing under the laws of the state of Delaware. Upon information and belief, Panasonic's principal place of business is located in Secaucus, New Jersey. Panasonic's registered agent for service of process is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

6.

Upon information and belief, Defendant Philips Electronics North America Corporation ("Philips") is a corporation organized and existing under the laws of the state of Delaware. Upon information and belief, Philips's principal place of business is located in New York, New York. Philip's registered agent for service of process is Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808.

7.

Upon information and belief, Defendant Pioneer Electronics (USA), Inc. ("Pioneer") is a corporation organized and existing under the laws of the state of Delaware. Upon information and belief, Pioneer's principal place of business is located in Long Beach, California. Pioneer's registered agent for service of process is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

8.

Upon information and belief, Defendant Research in Motion Corporation ("RIM") is a corporation organized and existing under the laws of the state of Delaware. Upon information and belief, RIM's principal place of business is

located at Irving, Texas. Defendant RIM's registered agent for service of process is CT Corporation System, 350 North St. Paul St., Dallas, Texas 75201.

9.

Upon information and belief, Defendant Samsung Electronics USA, Inc. ("Samsung") is a corporation organized and existing under the laws of the state of Delaware. Upon information and belief, Samsung's principal place of business is in Ridgefield Park, New Jersey. Defendant Samsung's registered agent for service of process is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

10.

Upon information and belief, Defendant Seagate Technology LLC. ("Seagate") is a corporation organized and existing under the laws of the state of Delaware. Upon information and belief, Seagate's principal place of business is located in Scotts Valley, California. Seagate's registered agent for service of process is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

11.

Upon information and belief, Defendant Sony Electronics Inc. ("Sony") is a corporation organized and existing under the laws of the state of Delaware.

Upon information and belief, Sony's principal place of business is located in Park Ridge, New Jersey. Sony's registered agent for service of process is Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808.

JURISDICTION AND VENUE

12.

This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and/or 1338.

13.

This Court has personal jurisdiction over the Defendants pursuant to O.C.G.A. § 9-10-91.

14.

Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and/or 1400.

OPERATIVE FACTS

THE PATENTS-IN-SUIT

15.

VES is the owner by assignment of all right, title, and interest in the '965 Patent and the '960 Patent (the '965 Patent and the '960 Patent are collectively referred to herein as the "Patents-in-Suit").

16.

The Patents-in-suit describe a novel method that reduces particular types of errors that can arise during video compression and playback called “blocking artifacts.”

17.

Video compression is concerned with striking a balance between throwing away as much information as possible (to reduce file size) while having a minimal effect on the viewing experience for an end user.

18.

Most compression techniques take advantage of 2 redundancies in particular. The first is temporal redundancy and the second is spatial redundancy.

19.

Temporal redundancy notes that successive frames of pixels in a video sequence are very similar. Typically, a video plays at 20-30 frames per second. Because there is very little change in the pixels between frames occurring in $1/30$ of a second, one may discard much of the information representing the new frame since it's redundant with the earlier frame. Instead of encoding the pixels in each frame independently, MPEG-based compression standards such as DivX

encode reference frames and then encode the difference between successive reference frames (using motion estimation to find the difference between frames).

20.

Spatial redundancy takes advantage of the fact that, in general, the intensity and color variations across image frames tends to be quite low in frequency. In other words, neighboring pixels tend to have similar intensity and color values. For example, in an image of a person wearing a blue shirt, all of the pixels that represent the shirt would have very similar intensity and color values. Furthermore, much of the high frequency detail is not readily perceived by the human eye and therefore does not need to be transmitted, stored or displayed.

21.

MPEG-based compression algorithms, including DivX, exploit spatial and temporal redundancy, and slowly varying colors and textures, by removing the redundant portions of the image data and only storing or transmitting the essential portion. These algorithms divide each frame into a grid of pixel matrices (typically 16x16 pixels) called macroblocks. Each macroblock is processed independently in the encoding process to remove redundant or unimportant data. When the image is to be displayed, each macroblock is

reconstructed from the compressed data, and then the macroblocks are arranged in a grid to form an output display image. Unfortunately, because of the information lost during the compression process, the displayed macroblocks often do not match perfectly in intensity and color along their edges. The resulting image exhibits noticeable and distracting lines at the boundaries between macroblocks, known as a “blocking artifact.”

22.

The Patents-in-Suit disclose novel methods of reducing blocking artifacts by, among other things, applying a smoothing filter to pixels at and/or near the macroblock boundary during the playback of the video.

23.

Claim 1 of the ‘965 Patent provides:

1. A computer-implemented method comprising:
dividing a picture into blocks that each include multiple pixels, wherein a
first pixel of a first block is located across a block boundary from a
second pixel of an adjacent second block;
determining whether to modify the first pixel based on pixel values of at
least two pixels of the first block including the first pixel and at least

two pixels of the second block including the second pixel, and further based on a quantization parameter; and modifying, if it is determined to modify the first pixel, the first pixel using information from the second block.

'965 Patent, Col. 6, ll. 28-39

24.

Similarly, Claim 1 of the '960 Patent provides:

1. A computer-implemented method comprising:
obtaining blocks that each include multiple pixels, a first pixel of a first block being separated from a second pixel of a neighboring second block by a block boundary;
selecting a correction mode from amongst first and second correction modes using information from the first block and information from the second block;
adjusting a first quantity of pixels including the first and second pixels if the first correction mode is selected; and
adjusting a second, different quantity of pixels including the first and second pixels if the second correction mode is selected.

'960 Patent, Col. 6, ll. 27-38.

THE INFRINGING PRODUCTS

Defendant Creative's Products

25.

Defendant Creative, within the United States, manufactures, uses, offers for sale, or sells MP3 players and other products, including, but not limited to, the ZEN 32GB, (collectively, the "Creative Products"). The Creative Products, among other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

26.

The Creative Products practice each limitation of the method set forth in at least claim 1 of the '965 Patent and Claim 1 of the '960 Patent.

27.

Defendant Creative does not have a license or other authorization to practice the claims set forth in either the '965 Patent or the '960 Patent.

Defendant Funai's Products

28.

Defendant Funai, within the United States, manufactures, uses, offers for sale, or sells video players and other products, including, but not limited to, the DP170SL8, (collectively, the "Funai Products"). The Funai Products, among

other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

29.

The Funai Products practice each limitation of the method set forth in at least claim 1 of the '965 Patent and Claim 1 of the '960 Patent.

30.

Defendant Funai does not have a license or other authorization to practice the claims set forth in either the '965 Patent or the '960 Patent.

Defendant Panasonic's Products

31.

Defendant Panasonic, within the United States, manufactures, uses, offers for sale, or sells video players and other products, including, but not limited to, the DMP-BD80, (collectively, the "Panasonic Products"). The Panasonic Products, among other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

32.

The Panasonic Products practice each limitation of the method set forth in at least claim 1 of the '965 Patent and Claim 1 of the '960 Patent.

33.

Defendant Panasonic does not have a license or other authorization to practice the claims set forth in either the '965 Patent or the '960 Patent.

Defendant Pioneer's Products

34.

Defendant Pioneer, within the United States, manufactures, uses, offers for sale, or sells video players and other products, including, but not limited to, the DV-393-S, (collectively, the "Pioneer Products"). The Pioneer Products, among other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

35.

The Pioneer Products practice each limitation of the method set forth in at least claim 1 of the '965 Patent and Claim 1 of the '960 Patent.

36.

Defendant Pioneer does not have a license or other authorization to practice the claims set forth in either the '965 Patent or the '960 Patent.

Defendant RIM's Products

37.

Defendant RIM, within the United States, manufactures, uses, offers for sale, or sells mobile telephones and other products, including, but not limited to,

the Blackberry Bold 9700, (collectively, the “RIM Products”). The RIM Products, among other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

38.

The RIM Products practice each limitation of the method set forth in at least claim 1 of the ‘965 Patent and Claim 1 of the ‘960 Patent.

39.

Defendant RIM does not have a license or other authorization to practice the claims set forth in either the ‘965 Patent or the ‘960 Patent.

Defendant Samsung’s Products

40.

Defendant Samsung, within the United States, manufactures, uses, offers for sale, or sells video players and other products, including, but not limited to, the BD-P4600 (collectively, the “Samsung Products”). The Samsung Products, among other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

41.

The Samsung Products practice each limitation of the method set forth in at least claim 1 of the '965 Patent and Claim 1 of the '960 Patent.

42.

Defendant Samsung does not have a license or other authorization to practice the claims set forth in either the '965 Patent or the '960 Patent.

Defendant Seagate's Products

43.

Defendant Seagate, within the United States, manufactures, uses, offers for sale, or sells media players and other products, including, but not limited to, the FreeAgent Theater, (collectively, the "Seagate Products"). The Seagate Products, among other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

44.

The Seagate Products practice each limitation of the method set forth in at least claim 1 of the '965 Patent and Claim 1 of the '960 Patent.

45.

Defendant Seagate does not have a license or other authorization to practice the claims set forth in either the '965 Patent or the '960 Patent.

Defendant Sony's Products

46.

Defendant Sony, within the United States, manufactures, uses, offers for sale, or sells video players and other products, including, but not limited to, the LBT-ZX80D, MHC-GZR33Di, SMP-U10, VGP-MR100U (collectively, the "Sony Products"). The Sony Products, among other things, utilize information from surrounding pixels to adjust the pixel values located at the boundaries of macroblocks to reduce blocking artifacts.

47.

The Sony Products practice each limitation of the method set forth in at least claim 1 of the '965 Patent and Claim 1 of the '960 Patent.

48.

Defendant Sony does not have a license or other authorization to practice the claims set forth in either the '965 Patent or the '960 Patent.

49.

All conditions precedent to the assertion of the claims set forth in this Complaint have been satisfied or waived.

COUNT ONE

CREATIVE'S INFRINGEMENT OF THE '965 PATENT

50.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-3, 12-27, and 49.

51.

By reason of some or all of the foregoing, Defendant Creative has infringed at least one claim of the '965 Patent.

52.

VES has suffered damages as the direct and proximate result of Defendant Creative's infringement of the '965 Patent.

COUNT TWO

CREATIVE'S INFRINGEMENT OF THE '960 PATENT

53.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-3, 12-27, and 49.

54.

By reason of some or all of the foregoing, Defendant Creative has infringed at least one claim of the '960 Patent.

55.

VES has suffered damages as the direct and proximate result of Defendant Creative's infringement of the '960 Patent.

COUNT THREE

FUNAI'S INFRINGEMENT OF THE '965 PATENT

56.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 4, 12-24, 28-30, and 49.

57.

By reason of some or all of the foregoing, Defendant Funai has infringed at least one claim of the '965 Patent.

58.

VES has suffered damages as the direct and proximate result of Defendant Funai's infringement of the '965 Patent.

COUNT FOUR

FUNAI'S INFRINGEMENT OF THE '960 PATENT

59.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 4, 12-24, 28-30, and 49.

60.

By reason of some or all of the foregoing, Defendant Funai has infringed at least one claim of the '960 Patent.

61.

VES has suffered damages as the direct and proximate result of Defendant Funai's infringement of the '960 Patent.

COUNT FIVE

PANASONIC'S INFRINGEMENT OF THE '965 PATENT

62.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 5, 12-24, 31-33, and 49.

63.

By reason of some or all of the foregoing, Defendant Panasonic has infringed at least one claim of the '965 Patent.

64.

VES has suffered damages as the direct and proximate result of Defendant Panasonic's infringement of the '965 Patent.

COUNT SIX

PANASONIC'S INFRINGEMENT OF THE '960 PATENT

65.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 5, 12-24, 31-33, and 49.

66.

By reason of some or all of the foregoing, Defendant Panasonic has infringed at least one claim of the '960 Patent.

67.

VES has suffered damages as the direct and proximate result of Defendant Panasonic's infringement of the '960 Patent.

COUNT SEVEN

PIONEER'S INFRINGEMENT OF THE '960 PATENT

68.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 6, 12-24, 34-36, and 49.

69.

By reason of some or all of the foregoing, Defendant Pioneer has infringed at least one claim of the '960 Patent.

70.

VES has suffered damages as the direct and proximate result of Defendant Pioneer's infringement of the '960 Patent.

COUNT EIGHT

PIONEER'S INFRINGEMENT OF THE '965 PATENT

71.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 6, 12-24, 34-36, and 49.

72.

By reason of some or all of the foregoing, Defendant Pioneer has infringed at least one claim of the '965 Patent.

73.

VES has suffered damages as the direct and proximate result of Defendant Pioneer's infringement of the '965 Patent.

COUNT NINE

RIM'S INFRINGEMENT OF THE '965 PATENT

74.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 7, 12-24, 37-39, and 49.

75.

By reason of some or all of the foregoing, Defendant RIM has infringed at least one claim of the '965 Patent.

76.

VES has suffered damages as the direct and proximate result of Defendant RIM's infringement of the '965 Patent.

COUNT TEN

RIM'S INFRINGEMENT OF THE '960 PATENT

77.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 7, 12-24, 37-39, and 49.

78.

By reason of some or all of the foregoing, Defendant RIM has infringed at least one claim of the '960 Patent.

79.

VES has suffered damages as the direct and proximate result of Defendant RIM's infringement of the '960 Patent.

COUNT ELEVEN

SAMSUNG'S INFRINGEMENT OF THE '965 PATENT

80.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 8, 12-24, 40-42, and 49.

81.

By reason of some or all of the foregoing, Defendant Samsung has infringed at least one claim of the '965 Patent.

82.

VES has suffered damages as the direct and proximate result of Defendant Samsung's infringement of the '965 Patent.

COUNT TWELVE

SAMSUNG'S INFRINGEMENT OF THE '960 PATENT

83.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 8, 12-24, 40-42, and 49.

84.

By reason of some or all of the foregoing, Defendant Samsung has infringed at least one claim of the '960 Patent.

85.

VES has suffered damages as the direct and proximate result of Defendant Samsung's infringement of the '960 Patent.

COUNT THIRTEEN

SEAGATE'S INFRINGEMENT OF THE '965 PATENT

86.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 10, 12-24, 43-45, and 49.

87.

By reason of some or all of the foregoing, Defendant Seagate has infringed at least one claim of the '965 Patent.

88.

VES has suffered damages as the direct and proximate result of Defendant Seagate's infringement of the '965 Patent.

COUNT FOURTEEN

SEAGATE'S INFRINGEMENT OF THE '960 PATENT

89.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 10, 12-24, 43-45, and 49.

90.

By reason of some or all of the foregoing, Defendant Seagate has infringed at least one claim of the '960 Patent.

91.

VES has suffered damages as the direct and proximate result of Defendant Seagate's infringement of the '960 Patent.

COUNT FIFTEEN

SONY'S INFRINGEMENT OF THE '965 PATENT

92.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 11-24, 47-49.

93.

By reason of some or all of the foregoing, Defendant Sony has infringed at least one claim of the '965 Patent.

94.

VES has suffered damages as the direct and proximate result of Defendant Sony's infringement of the '965 Patent.

COUNT SIXTEEN

SONY'S INFRINGEMENT OF THE '960 PATENT

95.

VES incorporates by reference as if fully set forth herein the averments contained within Paragraphs 1-2, 11-24, 47-49.

96.

By reason of some or all of the foregoing, Defendant Sony has infringed at least one claim of the '960 Patent.

97.

VES has suffered damages as the direct and proximate result of Defendant Sony's infringement of the '960 Patent.

WHEREFORE, VES prays that this Court:

- (1) Enter judgment in favor of VES and against Defendants for infringement of the '965 Patent;
- (2) Award damages to VES in an amount to be proven at trial for Defendants' infringement of the '965 Patent, pursuant to 35 U.S.C. § 284;
- (3) Enter judgment in favor of VES and against Defendants for infringement of the '960 Patent;

- (4) Award damages to VES in an amount to be proven at trial for Defendants' infringement of the '960 Patent, pursuant to 35 U.S.C. § 284;
- (5) This case be tried before a jury; and
- (6) VES have such other and further relief as the Court deems just and proper, premises considered.

This 15th day of March, 2010.

Respectfully submitted,

MORRIS, MANNING & MARTIN, LLP

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